IK-1
Owner's Manual & Installation Procedures
Safety Precautions

Before installing and operating EIKI interactive Kit, IK-1, read this manual thoroughly. The IK-1 provides many convenient features and functions. Operating the IK-1 properly enables you to manage those features and maintain it in good conditions for many years to come. Improper operation may result in not only shortening the product life, but also malfunctions or other accidents.

Safety Precautions

a) Do not expose the product to heat or moisture.
b) Protect the product from excessive shock.
c) If there are any abnormalities (abnormal noise, smell, smoke etc.) on the product, disconnect USB cable and contact your EIKI dealer.
d) Do not use damaged USB cable. This may cause short circuits or electrical shock.
e) Do not modify this product for any purpose.
f) Never attempt to repair the product by yourself. Please contact your EIKI dealer for servicing.
g) Avoid installing the product in locations exposed to strong magnetic fields, or electrical currents.
h) Do not touch the product or USB cable with wet hands.
i) Replace the batteries with the same type only.
j) Make sure the plus and minus terminals are correctly aligned when loading new batteries.
k) Never look directly into the laser light while a laser is emitted, otherwise eye damage may result.

AVOID EXPOSURE - LASER RADIATION IS EMITTED FROM THIS APERTURE

DANGER

LASER RADIATION - DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS

Maximum output <5 mW
Wavelength 650nm
Class IIIa laser product
Model: LB-00618DF

This device complies with 21 CFR chapter Subchapters J, CFR1040.10 and 1040.11
Laser Information:
FDA accession number: 0612646-00
Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

a) Reorient or relocate the receiving antenna.
b) Increase the separation between the equipment and receiver.
c) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
d) Consult the dealer or an experienced radio/TV technician for help.

Use of shielded cable is required to comply with class B limits in Subpart B of Part 15 of FCC Rules. Do not make any changes or modifications to the equipment unless otherwise specified in the instructions. If such changes or modifications should be made, you could be required to stop operation of the equipment.

Model Number (s): IK-1
Trade Name: EIKI
Responsible party: EIKI International, Inc.
Address: 30251 Esperanza Rancho Santa Margarita CA 92688-2132 U.S.A.
Telephone No.: 800-242-3454 (949-457-0200)
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B. Hardware and Software Requirement
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A. Product Overview

1) **Product description**

Thank you for using EIKI Interactive Kit, IK-1. It is an innovative breakthrough based on opto-electrical technology. Presentations can be controlled more effectively and directly on-screen without the need to move back and forth between the computer and screen. EIKI Interactive Kit, IK-1, provides remote writing and control, completely substitute mouse and chalk, and achieve various teaching or demonstration effects when working with electronic whiteboard software available in the market.

2) **Accessories included**

   a) Electronic pointer (long)  
   b) Signal pen (short)  
   c) Receiving device  
   d) Installation CD Software Driver  
   e) 2m USB cable  
   f) Owner's Manual (this leaflet)  
   g) 2x AA batteries  
      Optional Parts:  
      a) Installation ceiling bracket  
      b) 20m USB cable
B. Hardware and Software Requirement

1) **Hardware requirement**
   a) CPU: based on X86, Pentium 166 and above.
   b) Memory: 64MB RAM (128 MB RAM is recommended)
   c) Hardisk Space: 30MB free space.

2) **Software requirement**

3) **Before EIKI Interactive Kit, IK-1 Software Driver Installation for Windows 98**
   a) After connect EIKI Interactive Kit, IK-1 with USB Cable to USB Port, your system will automatically detect the new hardware.
   b) Follow instructions, select "searching for the latest Windows program version"
   c) Follow instruction.
      If you have Windows 98 CD Driver, just insert into your CD ROM and select Search CD ROM.
      If you choose to browse the internet for latest Windows, choose " Microsoft Windows Update"
      If you have pre-installed with Windows 98, browse to the path.
   d) Click "Next", your system will install with "HIDDEV.INF", after installation, click "Next", after that just click "Finish"
C. Before using IK-1

1) Ambient light
Eiki Interactive Kit, IK-1 utilizes Infra-Red (IR) light emitted from the tip of the pen/pointer. And the IR receiver on the IK-1 receives the IR and identifies the location against the screen. Therefore IK-1 receiver has to be located so that the IK-1 receiver's view covers the entire screen fully. IK-1 receiver's view can be identified by the red dots projected by IK-1 receiver. The recommended distance between each dot and each edge of the screen is 20% of the screen width.

On the other hand IR is also emitted from lighting lamps and the sun through windows. If IR receiver receives the IR from the lamps or the sun, IK-1 does not work well. Therefore the lamps or the window should not be in the IR receiver's view. If something reflects the light from the lamp or through the window, it should not be in the IR receiver's view either.

2) Positioning IK-1
The important point is to locate the light axis of the projector lens and IK-1 as close as possible. The best position is on the top of the projector, if the receiver's view can fully cover the screen.
The next will be in front of the projector, where IK-1 is located a little above or under the light axis of the projector. If either one is not possible, locate IK-1 beside the projector.
If the presenter stands mainly on the left side of the screen, located IK-1 on the opposite side (right) so that the presenter does not block the receiver's view.
D. Start using IK-1

1. Activation of EIKI Interactive Kit, IK-1 Software

1-a. Run from CD-ROM

Insert installation software CD into your CD drive, go to "My Computer" & double click on the CD ROM Drive.
Double click on EIKI IK-1.exe to execute the IK-1 software.

1-b. Run from your PC

Insert installation software CD into your CD drive, go to "My Computer" & double click on the CD ROM Drive.
Drag and drop 3 files from CD-ROM to the desk top on your PC.

```
Config.ini
EIKI IK-1.exe
resource.dll
```

Double click on EIKI IK-1.exe to execute the IK-1 software.

Then the following will appear.
1. Control panel for IK-1 with 8 icons on the desktop.
2. IK-1 icon in the task bar in the bottom of desktop.

3. Connect PC and IK-1 receiver with the USB cable supplied.
2. Calibration

Calibration is required before using IK-1.

By the calibration IK-1 learns the position and the dimension of the screen. Therefore once this is done, if the position of the screen, projector and the IK-1's receiver is fixed, no more calibration is required from next time.

Start calibration by right clicking IK-1 icon in the task bar and selecting "calibration"

Then laser beams are projected by the IK-1 receiver on the screen, this should guide the user to locate the red spot apart from the side of screen by 1/5 screen width.
"Suspend install Setting" is for fixed installation.
"Desktop install setting" is for portable usage.
Choose one and then click "Next".
Positioning the IK-1 receiver.
Follow the instruction so as to locate the red dots beside the screen as shown in the figure.
For Desktop Installation

Locate red dots beside the red <= => marks on the screen. Each dot should be located apart from the screen by 1/5 screen width.

By pulling back the receiver the space between two red dots can be widened. By lifting the receiver body against its stand the dots can be pulled up. Then click "Next".
Then a white field is shown with small red circle in the top right corner. Follow the instruction below.
Please aim lightpen at adjust point and press the left key of lightpen and finish calibration in turn. Place the tip of the pointer in the center of the red circle and press the button on the pointer once. Then the circle moves to the next position. Repeat this until the white field closes.

The calibration for IK-1 is going to complete. Click "OK" below with the pointer to close this dialog. If you cannot do it, close it with your mouse and redo calibration again.
For Suspend Installation

Follow instructions and click "Next".
"Setup Receive Box" help you confirm, debug the suspend install setting of the receiving box.

"Receive box's angle adjust and calibration" help you operate EIKI IK-1 and computer accurately. Be applied to the first use of suspend install of projector, projector screen, EIKI IK-1 signal receive box or screen resolution altered.
For Setup Receive Box

Setup receive box position testing on desktop.

Receive box will cast two beam of light, please adjust the position and angle of the box in order to make them cast to the projector screen's left side middle and right side middle, as the above sketch map.

Setup receive box position testing on suspend.

According to the desktop install position that previous step, the position that plumb with the ceiling is the rational position.

Follow instruction & click "Next", then click "Finish" to end the installation.
For Receive box's angle adjust and calibration

Follow instructions & click "Next".
Follow instructions & click "Next", then click "OK" to end the installation.
### E. Application

**Control Panel**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Icon" /></td>
<td>1) Hide and show control panel</td>
</tr>
<tr>
<td><img src="image2.png" alt="Icon" /></td>
<td>Show all or most left icon</td>
</tr>
<tr>
<td><img src="image3.png" alt="Icon" /></td>
<td>2) Electron Blank Board</td>
</tr>
<tr>
<td><img src="image4.png" alt="Icon" /></td>
<td>Show white blank background with tool bar</td>
</tr>
<tr>
<td><img src="image5.png" alt="Icon" /></td>
<td>3) Spot Light</td>
</tr>
<tr>
<td><img src="image6.png" alt="Icon" /></td>
<td>Show only the area through circle or square (frame can be changed by double clicking)</td>
</tr>
<tr>
<td><img src="image7.png" alt="Icon" /></td>
<td>Circle or square moves to the clicked area</td>
</tr>
<tr>
<td><img src="image8.png" alt="Icon" /></td>
<td>Size of circle or square can be changed by dragging</td>
</tr>
<tr>
<td><img src="image9.png" alt="Icon" /></td>
<td>4) Drag curtain</td>
</tr>
<tr>
<td><img src="image10.png" alt="Icon" /></td>
<td>Put black curtain on the screen.</td>
</tr>
<tr>
<td><img src="image11.png" alt="Icon" /></td>
<td>By dragging white part each side of curtain can be dragged to the center</td>
</tr>
<tr>
<td><img src="image12.png" alt="Icon" /></td>
<td>5) Desktop draw</td>
</tr>
<tr>
<td><img src="image13.png" alt="Icon" /></td>
<td>Allow drawing on desktop with tool bar</td>
</tr>
<tr>
<td><img src="image14.png" alt="Icon" /></td>
<td>6) Screen keyboard</td>
</tr>
<tr>
<td><img src="image15.png" alt="Icon" /></td>
<td>For typing letters</td>
</tr>
<tr>
<td><img src="image16.png" alt="Icon" /></td>
<td>7) Magnifying glass</td>
</tr>
<tr>
<td><img src="image17.png" alt="Icon" /></td>
<td>Shows magnified image</td>
</tr>
<tr>
<td><img src="image18.png" alt="Icon" /></td>
<td>Just after selecting this icon right clicking can be done</td>
</tr>
<tr>
<td><img src="image19.png" alt="Icon" /></td>
<td>(the color of right button is changed from brown to blue when activated)</td>
</tr>
</tbody>
</table>

The Control Panel will appear by double click on EIKI Interactive Kit, IK-1, icon. If you have closed the Control Panel, just left click on EIKI Interactive Kit, IK-1, icon and select show control panel or double click on EIKI Interactive Kit, IK-1, icon.
Click on Electron Blank Board, and the writing tools icon will appear.

- Pen
- Line
- Ellipse
- Spot Light
- Clear
- Undo
- Eraser
- Rectangle
- Wave
- Drag curtain
- Toggle between desktop draw & electron blank board
- Redo
- Thickness
- Color Selection
- Pause
- Play
- Open
- Begin
- End
- Save
- Exit
- Exit
<table>
<thead>
<tr>
<th>Icon</th>
<th>Function</th>
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<tbody>
<tr>
<td>Pen</td>
<td>Draw line</td>
</tr>
<tr>
<td>Line</td>
<td>Draw straight line</td>
</tr>
<tr>
<td>Ellipse</td>
<td>Draw ellipse by dragging</td>
</tr>
<tr>
<td>Spot Light</td>
<td>Show only the area through circle or square</td>
</tr>
<tr>
<td>Clear</td>
<td>Erase all</td>
</tr>
<tr>
<td>Undo</td>
<td>Go one step backward in drawing; Broken line is considered as 2 elements</td>
</tr>
<tr>
<td>Thickness</td>
<td>Click the part of triangle to change</td>
</tr>
<tr>
<td>Play</td>
<td>Play back all of elements shown in the original speed from the beginning</td>
</tr>
<tr>
<td>Begin</td>
<td>Go to the status before drawing</td>
</tr>
<tr>
<td>Open</td>
<td>Open the saved drawing file</td>
</tr>
<tr>
<td>Exit</td>
<td>Close the tool bar</td>
</tr>
</tbody>
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<tr>
<td>Eraser</td>
<td>Erase part</td>
</tr>
<tr>
<td>Rectangle</td>
<td>Draw rectangle by dragging</td>
</tr>
<tr>
<td>Wave</td>
<td>Draw wave line</td>
</tr>
<tr>
<td>Drag curtain</td>
<td>Put black curtain on the screen. By dragging white part each side of</td>
</tr>
<tr>
<td></td>
<td>curtain can be dragged to the center</td>
</tr>
<tr>
<td>Toggle between desktop draw &amp; electron blackboard</td>
<td>Toggle the background between blank white and desktop</td>
</tr>
<tr>
<td>Color</td>
<td>Selected color is shown in the top left box</td>
</tr>
<tr>
<td>Pause</td>
<td>Stop the play back</td>
</tr>
<tr>
<td>End</td>
<td>Show completed drawing</td>
</tr>
<tr>
<td>Save</td>
<td>Save the drawing</td>
</tr>
</tbody>
</table>
How to use the pen/pointer to control mouse or draw line

Pointer - While the button is pressed, IR signal is emitted. This is good for soft screen.
Pen - While the white tip is tilted or pressed against solid screen, IR signal is emitted.

Mouse control

Left click
After placing the tip on the target, press and release the button on the pointer.
Press and release the tip of pen on the target.

Right click

![Right Click Mouse](image)

After selecting Right-click in the Control Panel do the following.
After placing the tip on the target, press and release the button on the pointer.
Press and release the tip of pen on the target.

Double click
After placing the tip on the target, press and release the button twice on the pointer.
Press and release the tip of pen twice on the target.

Changing function of the mouse pointer to pen
By selecting either "Desktop Draw" or "Electron Blank Board" in the "Control Panel", the tool bar for drawing is displayed and the function is changed to pen from mouse pointer.
By closing drawing tool bar with "Exit" button or "x" button, the function is changed to mouse pointer from pen.
How to draw

After placing the tip of the pointer on the target, while holding the button pressed, move the tip as you like and release the button at the end.

After placing the tip of the pen on the target while holding the tip pressed on the screen, move the tip as you like and release the tip at the end.
**Red LED**
This LED is lit up when connected to PC through USB cable.

**Green LED**
This is for future use

**Left & Right laser emitter**
This projects red dot on the left & right hand side of the screen

**IR sensor**
This detects the IR from the pen/pointer.

**The IK-1 icon in task bar shows the status as follows**

- Not connected with IK-1 receiver
- Connected with IK-1 receiver and ready for use
**System Setting**

Open System setting by right clicking IK-1 icon in the task bar and selecting "System Setting".

Select "Magnification" sheet tab to change magnification.
Select "User's Programs Setting" sheet tab in order to add shortcut for the application.
Select "Power Point Setting" sheet tab to show the auxiliary tool while PowerPoint is showing...
Select "Program Setting" sheet tab in order to set auto run EIKI IK-1 when the system is starting.
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